

**2010 HyspIRI Science Workshop
NASA Decadal Survey Mission
24-26 August 2009**

Sheraton Pasadena Hotel (HyspIRI Science Workshop August 24-26)
303 Cordova St., Pasadena, CA 91101
(626) 449-4000 or 1-800-457-7940

Ask for the Reservations Department; Request the group rate for the HYSPRI Meeting

24 Aug 2010

- 8:00 AM Registration
- 8:45 AM Welcome and Objectives of HyspIRI Science Workshop - Woody Turner, John LaBrecque
- 9:00 AM Overview of Decadal Survey Missions and Context for HyspIRI - John LaBrecque and Woody Turner
- 9:20 AM Options for Large HyspIRI Precursor Data Sets with Climate Connections - Jack Kaye
NASA Earth Science Division, Associate Director for Research
- 9:40 AM Update HyspIRI Mission Concepts - Carl Bruce, Lead
- VSWIR Science Measurement Baseline - Rob Green
- 9:50 AM - TIR Science Measurement Baseline - Simon Hook
- 10:00 AM Break
- 10:30 AM Update HyspIRI Mission Concepts
- VSWIR Concept - Carl Bruce
- 10:40 AM - TIR Concept - Marc Foote
- 10:50 AM - Low Latency Concept - Dan Mandl
- 11:00 AM - Mission Concept - Bogdan Oaida
- 11:10 AM Draft Preliminary HyspIRI Mission Level 1 Requirements - Rob Green and Simon Hook
- 11:20 AM Why the NASA HyspIRI Mission is Critical to the Future of Global Climate Science - Greg Asner
- 12:00 PM Lunch
- 1:20 PM Imaging spectroscopy of light-absorbing impurities in snow and ice: Climate and Policy Implications - Thomas Painter

1:40 PM	HyspIRI Measurement of Fire Parameters for Climate Change and Carbon Budgets: Fuel, Occurrence, Intensity and Recovery - Louis Giglio, Ivan Csaszar
2:00 PM	Integration of GOES, MODIS and HyspIRI Thermal Satellite Imagery for Evaluation of Daily Evapotranspiration at the Sub-Field Scale - Martha Anderson, W.P. Kustas, W.P. Dulaney, F. Gao, D. Sumner
2:20 PM	Imaging spectroscopy of plant metabolic and ecological function - Philip A. Townsend, Shawn P. Serbin, Aditya Singh, Brenden E. McNeil and Eric L. Kruger
2:40 PM	Characterizing and Modeling Urban Heat Islands By Using Thermal Infrared Data from Multiple Satellite Sensors - Dr. QIHAO WENG
3:00 PM	Break
3:20 PM	HyspIRI Preparatory Data Sets for Volcanology - Michael Abrams, Vince Realmuto, Dave Pieri, Rob Wright
3:40 PM	Making the connection between imaging spectroscopy and direct measurements of ecosystem function - Shawn P. Serbin, Eric L. Kruger, Aditya Singh and Philip A. Townsend
4:00 PM	Summary of HyspIRI Sunlight Subgroup Activities. or "HyspIRI Sunlight Subgroup: Glint Characterization, Determination of Impacts on Science, and Potential Mitigation Approaches. Eric Hochberg
4:20 PM	Using HyspIRI Derived Parameters in Climate Related Models - Fred Huemmrich, Y-B. Cheng, P. Campbell, R.Knox, E.M. Middleton
4:40 PM	Contribution of HyspIRI measurements to improving the quality of satellite-derived Climate Data Records - Peter Minnett
5:00 PM	Future Workshop with Climate Modeling and HyspIRI Science Community - Susan Ustin
5:20 PM	DISCUSSION: Roles of HyspIRI in Climate, Carbon Global Change, Societal Impacts and Policy
5:30 PM	Close

25 Aug 2009

8:30 AM	Spectroscopy of the Gulf Oil Spill - Roger Clark
9:00 AM	Fugitive Emission from Fossil Fuel Production with Imaging Spectroscopy Measurements - Ira Leifer

9:20 AM	Mapping Plant Species and Plant Functional Types from the West Coast to the Gulf - D. A. Roberts, Keely L. Roth, Philip E. Dennison, Ray Kokaly, Michael Toomey, Seth Peterson, Susan Ustin
9:40 AM	Mapping Vegetation Across Spatial and Spectral Scales Using Multiple Endmember Spectral Mixture Analysis - Philip E. Dennison, Abigail N. Schaaf, Gregory K. Fryer, Keely L. Roth, and Dar A. Roberts
10:00 AM	Break
10:20 AM	A radiometrically-accurate HyspIRI dataset created for arid land surfaces using combined ASTER and AVIRIS data - Michael Ramsey, Christopher Hughes
10:40 AM	Preliminary Results - Characterization of Hydrothermal Systems Using Simulated HyspIRI Data - Fred Kruse
11:00 AM	Performance of the proposed HyspIRI TIR bands for accurate compositional identification of eolian dust, ash and sand - Scheidt, S.P., M.S. Ramsey, R. Mohummad, E. Mercurio, N. Lancaster
11:20 AM	A Rapid Delivery Data Delivery Operations Concept for HyspIRI - Steve Chien, David McLaren, Daniel Mandl, Jerru Hengemihle
11:40 AM	Mapping Effective Fire Temperature Using AVIRIS and MASTER - Philip E. Dennison and D. Scott Matheson
12:00 PM	Lunch
1:20 PM	HyspIRI Decadal Survey VSWIR Science Questions - Dar Roberts
1:40 PM	HyspIRI Decadal Survey TIR Science Questions - Anupma Prakash
2:00 PM	HyspIRI Decadal Survey Combined Science Questions - Frank Muller-Karger
2:20 PM	NEON AOP Interaction with HyspIRI - Tom Kampe
2:40 PM	The SOCO Concept to Pursue Measurement of Soil Organic Carbon with Combined Ground and Imaging Spectrometer Measurements - Chuck Rice
3:00 PM	Break
3:20 PM	Predicting Total Phosphorus (TP) by relating Chl-a and Secchi Disk Transparency Using Spectroscopy for Indianapolis Drinking Water Sources - Kaishan Song, Lin Li, Shuai Li, Linhai Li, Tingting Zhang, Lenore & Bob
3:40 PM	Giant Kelp Forests and Their Response(s) to Climate Changes - Kyle Cavanaugh and Dave Siegel
4:00 PM	Glint-aerosol discrimination using NIR-SWIR wavelengths - Youngje Park and HyspIRI Sunglint group

4:20 PM	Changes in community structure and productivity in a coastal upwelling system from the CARIACO ocean time-series and implications for future satellite measurements - Frank Muller-Karger
4:40 PM	Hot Target Saturation Analysis Report - Vince Realmuto
5:00 PM	Close

26 Aug 2010

8:00 AM	A Summary of the May 2010 GSFC-hosted Symposium on Ecosystem Products Presenter: Elizabeth Middleton for the Team
8:20 AM	Preliminary Results - Assessment of ecosystem diversity and urban boundaries, using surface reflectance and emissivity - Petya K. E. Campbell and Kurtis J. Thome
8:40 AM	Remote estimation of pigment content and composition in terrestrial vegetation: challenges and solutions - Anatoly A. Gitelson
9:00 AM	An Investigation of Cloud Cover Probability for the HyspIRI Mission Using MODIS Cloud Mask Data - Adam Gunderson, Danielle Nuding
9:20 AM	HyspIRI VSWIR Level 2 ATBD and HICO sample science results - Bo Cai Gao
9:40 AM	EnMAP and TES-GAP Process Research Oriented Missions - Andreas Mueller
10:00 AM	Break
10:20 AM	The Processing Chain, Calibration and Data Quality Procedures of the Future Hyperspectral Satellite Mission EnMAP - M. Bachmann, C. Makasy, A. de Miguel, A. Müller, R. Müller, A. Neumann, G. Palubinskas, R. Richter, M. Schneider, T. Storch, T. Walzel, H. Kaufmann, L. Guanter, K. Segl, T. Heege, V. Kiselev
10:40 AM	Cal/Val Activities on European Volcanoe Test Sites in the VNIR-SWIR and TIR Spectral Range and Related Missions - Authors: Massimo Musacchio, Maria Fabrizia Buongiorno, Stefania Amici, Stefano Corradini, Alessandro Piscini, Luca Merucci, Valerio Lombardo, Malvina Silvstri, Claudia Spinetti, Laura Colini.
11:00 AM	Current Status of Japanese Hyperspectral Remote Sensing Mission, HISUI - T. Matsunagu
11:20 AM	The New InfraRed Sensor Technology (NIRST) camera on the Aquarius/SAC-D satellite, Description & scheduling AND Land and Sea surface temperature retrieval algorithms, Hugo Marraco, Marisa Kalemkarian
11:50 AM	Lunch
1:20 PM	Australia and NASA HyspIRI - Alex Held, Youngje Park

1:40 PM	HyspIRI in relation to International Mission - Rob Green and Simon Hook
2:00 PM	Simulating the response of the HyspIRI 4 micron to active lavas, using data acquired by the EO-1 Hyperion - Rob Wright
2:20 PM	The MODTRAN®5.2* Radiation Transfer Model and Applications to HyspIRI - Lex Berk
2:40 PM	Simulated HyspIRI data for measuring volcanic thermal features - R. Greg Vaughan
3:00 PM	Break
3:20 PM	HyspIRI Global Coverage and Downlink Approach - Michael Mercury
3:40 PM	Using NAALSED as a validation tool and proxy dataset for HyspIRI thermal infrared products - Glynn Hulley and Simon Hook
4:00 PM	Orbit dynamics, overpass times and repeated sensor coverage: implications for seasonal measurements and change detection Robert G. Knox and Elizabeth M. Middleton
4:20 PM	A Novel Approach to Report HyspIRI Location and Observation Information in a Compact Format for Data Distribution and Utilization - Joseph Boardman
4:40 PM	HyspIRI Draft Preliminary Level 1 Requirements - Robert O. Green, Simon Hook
5:00 PM	Review of Workshop and Next Steps - Woody Turner, John LaBrecque, Robert O. Green, Simon J. Hook
5:20 PM	Close

POSTERS

- A New Approach to Inverse Modeling for Retrieval of Coastal water Quality Parameters - SIMA BAGHERI, Z. H. Michalopoulou
- Mapping Plant Functional Types with Synergistic Use of Spectrometer and Thermal Imagery - Yen-Ben Cheng, Elizabeth M. Middleton, Bruce D. Cook, Qingyuan Zhang
- Monitoring of Natural and Anthropogenic Gaseous Emissions with LWIR Spectral Imagery - David Tratt
- The APEX Airborne Imaging Spectrometer - Michael Jehle
- HyspIRI on-board calibration panel viewing options - Adam Gunderson
- HyspIRI cloud statistics investigation current results - Adam Gunderson, Cheng, Samuel R.
- Sun Glint: Quantifying the Effects of Glint on an Orbital Mission - Danielle Nuding, Richard Otero

- Diffused Matrix Format: A New Output Format for Onboard Processing Systems - A. Cristo, P. Martínez, R.M. Pérez, L.M. Hernández, J. Merino, D. Valencia
- Characterization of Uncertainties due to Directional Surface Reflectance Effects and Implications for Decadal Survey Missions - Charles K. Gatebe, Miguel O. Roman, Rajesh Poudyal
- The APEX Airborne Imaging Spectrometer - M. Jehle, A. Hueni, A. Damm, P. D'Odorico, M. Kneubühler, K. Meuleman* and M.E. Schaepman
- Identification of Apatite's Spectral Features using ASTER Thermal Infrared Data in Araxá and Tapira Regions, Brazil - Edilson de Souza Bias
- The Influence of Urban Lakes in Thermal Control of Heat Island Phenomenon in Brasilia, DF, Brazil - Rômulo José da Costa Ribeiro
- Mapping and Quantifying the Weathering Degree of Tropical Soils in Central Brazil using Imaging Spectroscopy - Gustavo M.M. Baptista, Perseu F. dos Santos, Rodrigo S. Corrêa, José S. Madeira Netto, Paulo Roberto Meneses.
- Hyperspectral Imaging for Biodiversity Assessment of Coastal and Terrestrial Ecosystems - Miguel Velez-Reyes, James Goodman, J. Danilo Chinea-Rivera, Skip Van Bloem, Shawn D. Hunt, Vidya Manian, John D. Lekki, James R. Demers, and Liane S. Guild
- EO-1 Prototyping for Seasonal Ecosystem Dynamics - Elizabeth Middleton, Stephen Ungar, Petya Campbell, Lawrence Ong, Qingyuan Zhang and K. Fred Huemmrich
- Overview of The New InfraRed Sensor Technology (NIRST) camera on the Aquarius/SAC-D satellite - Hugo Marraco, Marisa Kalemkarian
- NIRST applications retrieval algorithms - Marisa Kalemkarian
- Advanced Thermal IR Spectral Imager Development for Earth Observation Applications - Jeffrey L. Hall, David J. Gutierrez, John A. Hackwell, Brian P. Kasper, Eric R. Keim, George J. Scherer, David M. Tratt, David W. Warren, and Stephen J. Young
- Hyperspectral thermal emission spectrometer (HyTES): the next generation imaging spectrometer for earth science - William R. Johnson, Simon J. Hook, Pantazis Z. Mouroulis, Daniel W. Wilson, Sarath D. Gunapala, Cory J. Hill, Vincent J. Realmuto, Andrew U. Lamborn, Chris G. Paine, Jason M. Mumolo & Bjorn T. Eng
- A Multiple Field Point Optical Stimulus for Scanning the Spatial and Spectral Properties of HyspIRI type Imaging Spectrometers - Michael Eastwood, Rob Green, Pantazis Mouroulis, Eric Hochberg, Riley Meehan, Randy Hein, James Coles, and Sven Geier
- Sub-Mesoscale Spatial Variability of Sea Surface Temperature - Andy Jessup
- Overview of Compact Imaging Spectrometer on the Science and Technology Satellite -3 - Seung-Wu Rhee, Jun-Ho Lee, Yongseung Kim

- Introduction on developing Korea-specific climate change model using Hyperspectral data - Woo-Kyun Lee , Doo-Ahn Kwak
- HISUI Hyperspectral Imager Suite - A Japanese Spaceborne Hyperspectral and Multispectral Remote Sensing Mission - Tsuneo Matsunaga, Akira Iwasaki, Osamu Kahimura, Kenta Ogawa, Nagamitsu Ohgi, and Satoshi Tsuchida
- Multispectral and hyperspectral information available in Costa Rica - Airborne Research and Remote Sensing Program, PRIAS - Cornelia Miller
- "Space Observations of Global Lake Temperatures: The potential of HyspIRI as an additional data source -P. Schneider and Simon J. Hook"

8/23/10